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BOOK REVIEW

Cathy W. DiBernardo, Ellen F. Greenberg: Ophthalmic ultrasound—A diagnostic atlas (2nd ed.)

Thieme Medical Publishers, Inc., New York, NY, USA, 2007 €89.95; CHF149.-ISBN: 978-3-13-108632-7

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The second edition hardcover atlas on ophthalmic ultrasound by DiBernardo and Greenberg introduces the reader to this "learning-by-viewing" subspecialty of ophthalmology. The book contains 154 pages, and is divided into 11 chapters, including basic screening techniques, anterior segment ultrasound, vitreo-retinal diseases, tumors, trauma, orbital diseases and biometry. The 251 figures, mainly taken from the first edition, are now processed to remove overexposure. Every book chapter starts with a short introduction and a list of suggested readings, followed by the clinical ultrasound images.

The first section focuses on basic techniques and indications for ophthalmic ultrasound. Clinical photographs and illustrations help to understand how ophthalmic ultrasound images are achieved and read in a standardized way. Unfortunately, this chapter lacks details about the physics of ultrasound and some technical illustrations on devices, which would be helpful for many readers just starting with ophthalmic ultrasonography.

The second part illustrates the different impressions of the anterior segment by use of various ultrasound B-probes with immersion techniques. This chapter gives an impression about what can be imaged with 10- and 20-MHz devices, even in the absence of a high-resolution ultrasound probe such as ultrasound biomicroscopy. It also emphasizes the role of 50- and 100-MHz probes in achieving high-quality images of anatomical details in anterior segment pathology. Unfortunately, important corneal pathologies, such as corneal decompensation, ectasia or changes by refractive surgery are missing. A discussion about the best frequency to be used for diverse pathologies would also be desirable.

Chapter three deals with vitreous pathology and provides numerous standardized A-scans. Together with the fourth chapter about retinal disease, the reader is given an impression of the different appearance of echogenic membranes of different origin. However, adding a classification of posterior vitreous detachment and endophthalmitis to this chapter would be exceedingly supportive.

Chapter five gives an overview about choroidal pathology on ultrasound. Here, the reader can learn about differential diagnosis of choroidal and retinal detachment, before he greets the frequently confusing ultrasound findings in ocular trauma. Impressions of the challenging and highly variable appearance of the injured eye on ultrasound are provided in chapter six.

The seventh part of the book covers one of the key applications of ophthalmic ultrasound, namely the differential diagnosis of ocular tumors. With lots of A- and B-scan images, the authors illustrate the different appearance of choroidal melanoma, metastasis, nevus, haemangioma, melanocytoma, disciform macular lesion and retinoblastoma. The authors provide a table of acoustic characteristics of the tumors, which is very welcome for daily ultrasound practice. To understand the echographic phenomena described in this chapter, some histological sections of the screened cases would be helpful. It would also be supportive to give more detailed information about the ultrasound features of intraocular tumors that are not melanoma, and to provide more images of such lesions.

The eighth to tenth parts of the book deal with optic nerve, extraocular muscles and orbital diseases. Photographic illustrations help to understand some specific

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examination techniques of para- and retrobulbar structures, which are different to ultrasonography techniques for intraocular pathology. Unfortunately, the variety of ultrasound images concerning orbital pathology illustrated here is not supported by computer tomography or magnetic resonance images, which are frequently used for such disorders in daily practice. Ultrasound images of frequent findings like arachnoidal cysts, optic meningeomas and gliomas are sadly missing.

The last chapter deals with some special ocular conditions, like microphthalmus, phthisis, and also with ultrasound artefacts in eyes with endotamponades like gas or silicone oil. A short introduction to ocular biometry is provided in this part, but is regrettably not dealt with in detail.

The low price of this compact book suggests it to be used by residents and ophthalmologists who start with ophthalmic ultrasound. Therefore, one would enjoy more discussion about the use of different probe frequencies and the physical properties of ultrasound in the eye. Up-to-date suggested readings, which would help the reader to get an impression of current ophthalmic ultrasound, are also scarce. Furthermore, a debate about sources of examiner-related artefacts and their forestalling would be welcome.

In summary, Cathy W. DiBernardo and Ellen F. Greenberg provide a nice overview of ophthalmic ultrasound with plenty of images. This book is suitable as an atlas on frequent ultrasound findings for general ophthalmologists, who do not deal with complex ocular pathology in daily practice.